

Page Description

Page 1: Desktop Configuration w/ LQFP-48 package

Revision History

Ver 0.50

(1)Preliminary version.

Ver 0.51

- (1)Delete TQFP64 package.
- (2)Use Self Bias for S/PDIF-IN.

Ver 0.52

(1)Update the pin definite of photo coupler PC900V.

Ver 0.53

- (1)Update the SPDIF IN Circuit (add 75 ohms and support Self Bias).
- (2)Update the VREFO Circuit to follow Codec default setting.
(Vista Class Driver will not help to change the default pin define , so design by default pin setting)
- (3)Change the 1N4148 to BAT54A/SOT (VREFO circuit) for better THD+N performance when 32 ohms load.

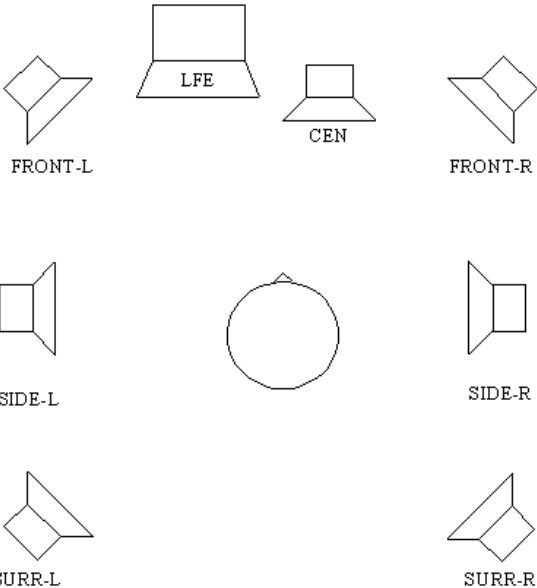
Ver 0.55

- (1)Change input port decoupling CAPs to 4.7uF/X5R/0805/10V for Vista Premium.
- (2)Change output port decoupling CAPs to 10uF or 100uF DIP for Vista Premium.
- (3)Add series resistors 75 ohm for output/retasking ports, 1K ohm for dedicated input ports.
- (4)Add 22K ohm pulled low resistors on ports that use DIP decoupling.
- (5)Change SPDIF-IN (RCA connector) decoupling CAP to 470pF.
- (6)Modify LINE2-JD and MIC2-JD connection circuit that suit for HDA front panel only.

Ver 0.56

- (1)Add 47ohm + 1000pF on SENSE_B circuit to compatible with AC97 and HDA front panels.

7.1 Speaker Configuration for ALC885



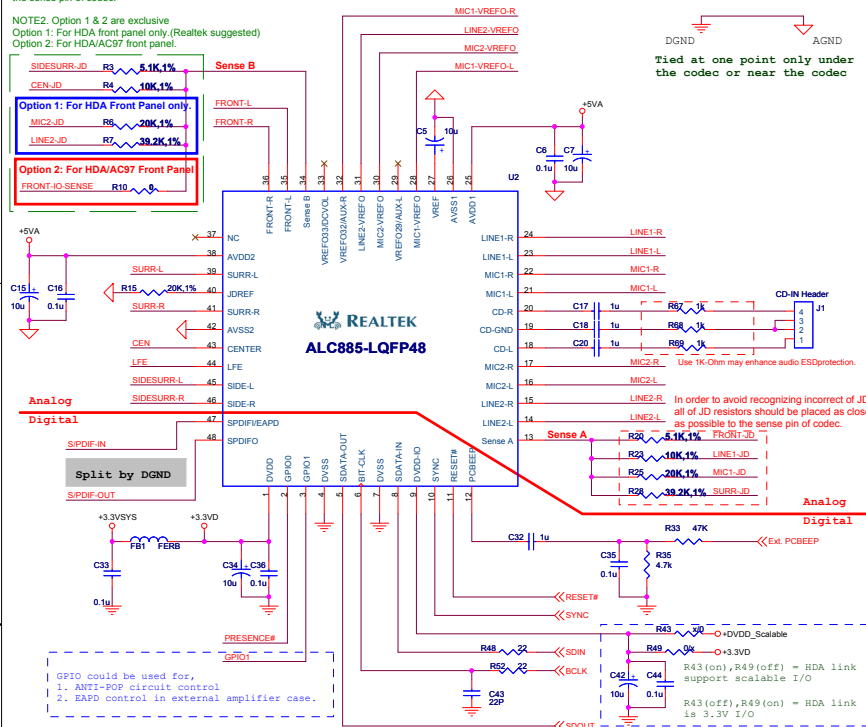
Desktop Configuration

	PORT-A	PORT-B	PORT-C	PORT-D	PORT-E	PORT-F	PORT-G	PORT-H
Function	SURR	MIC-IN	LINE-IN	FRONT	LINE2	MIC2	CEN/LFE	SIDE
Location	Rear	Rear	Rear	Rear	Front	Front	Rear	Rear

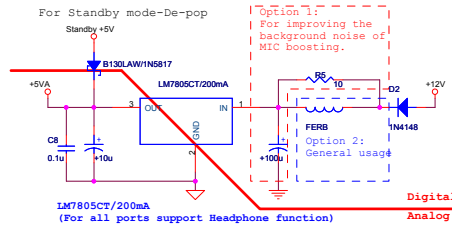
AUDIO CODEC - ALC885

NOTE1: In order to avoid recognizing incorrect of JD, all of JD resistors should be placed as close as possible to the sense pin of codec.

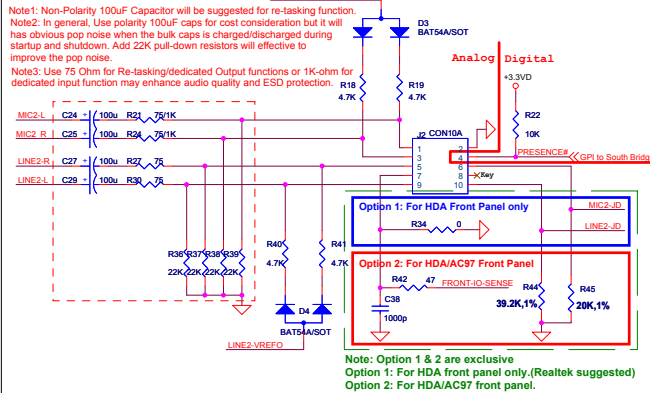
NOTE2: Option 1 & 2 are exclusive
Option 1: For HDA front panel only (Realtek suggested)
Option 2: For HDA/AC97 front panel.



AUDIO POWER

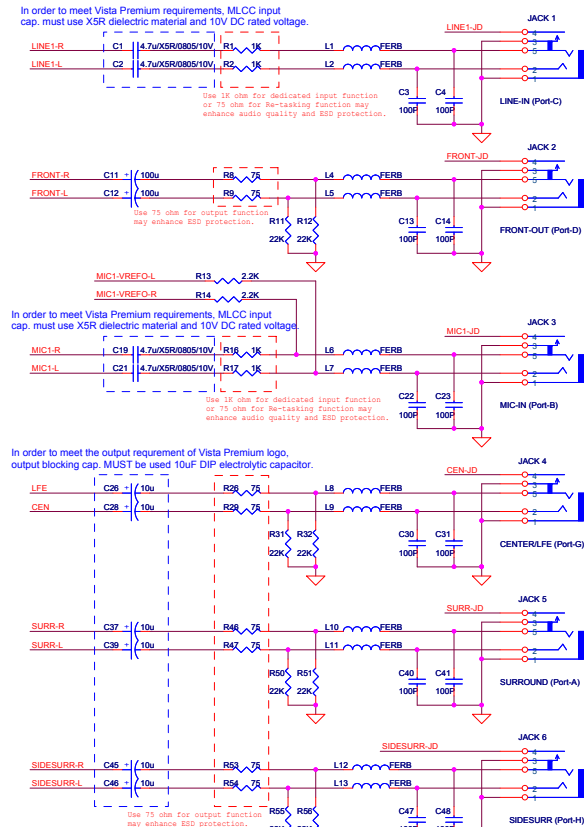


FRONT HEADER

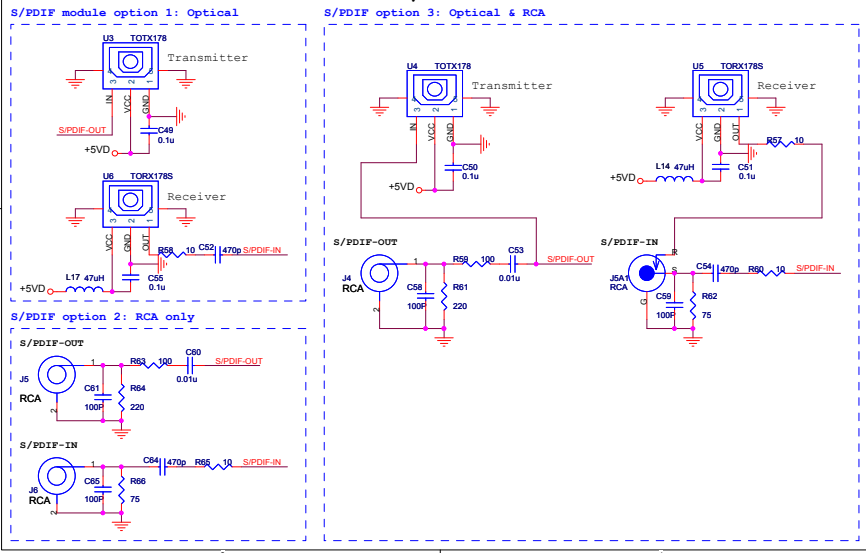


ANALOG I/O CONNECTOR

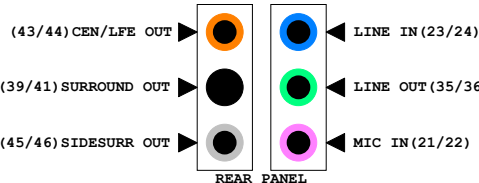
In order to meet Vista Premium requirements, MLCC input cap. must use X5R dielectric material and 10V DC rated voltage.



SPDIF I/O CONNECTOR



REAR PANEL PHONJACK



ALC885 Configuration (7.1 Channel)

Rear Panel: 6, dedicated audio jacks

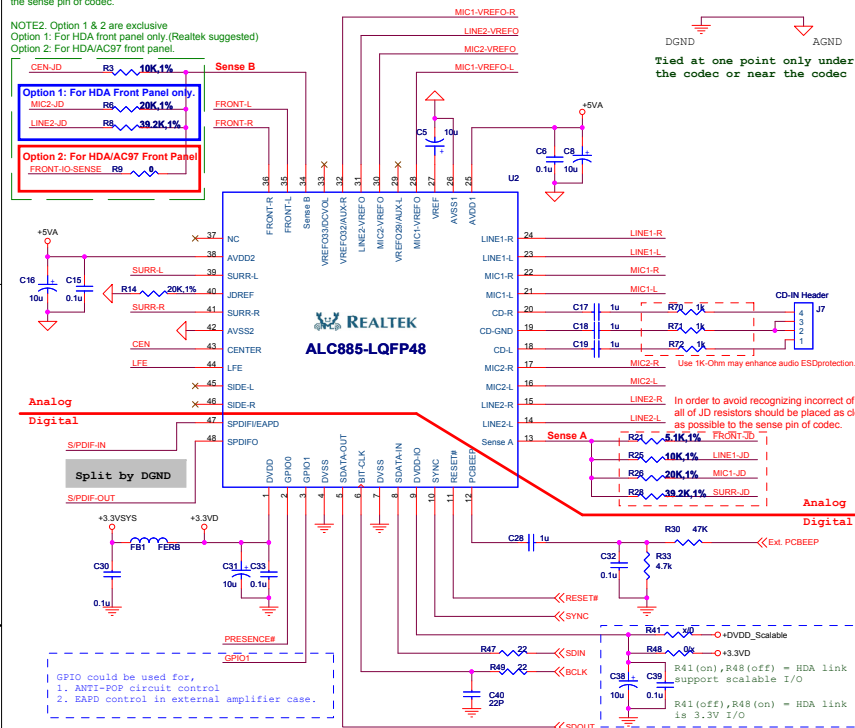
Front Panel: 2 re-tasking audio jacks

Pin Assignment	Location	Re-tasking
FRONT (pin-35,36)/Port-D	Rear Panel	Front-Out, HP-Out
SURR (pin-39,41)/Port-A	Rear Panel	Surr-Out
CEN/LFE (pin-43,44)/Port-G	Rear Panel	Cen/Lfe-Out
SIDE (pin-45,46)/Port-H	Rear Panel	Side-Surr-Out
LINE1 (pin-23,24)/Port-C	Rear Panel	Line-In
MIC1 (pin-21,22)/Port-F	Rear Panel	Mic-In
LINE2 (pin-14,15)/Port-E	Front Panel	HP-Out, Line-In, Mic-In
MIC2 (pin-16,17)/Port-F	Front Panel	Mic-In, HP-Out, Line-In

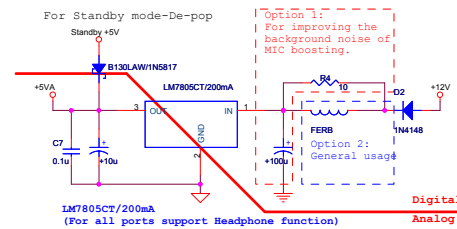
AUDIO CODEC - ALC885

NOTE1: In order to avoid recognizing incorrect of JD, all of JD resistors should be placed as close as possible to the sense pin of codec.

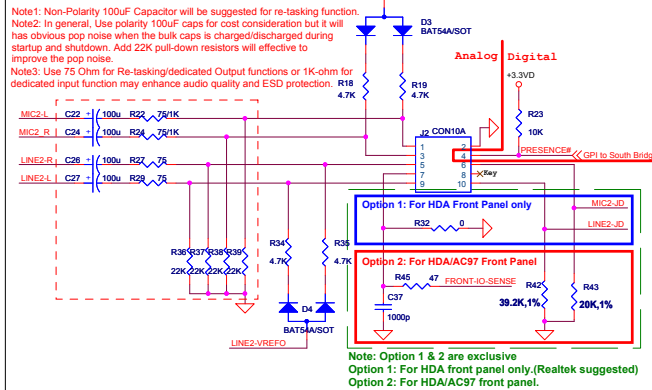
NOTE2: Option 1 & 2 are exclusive
Option 1: For HDA front panel only (Realtek suggested)
Option 2: For HDA/AC97 front panel



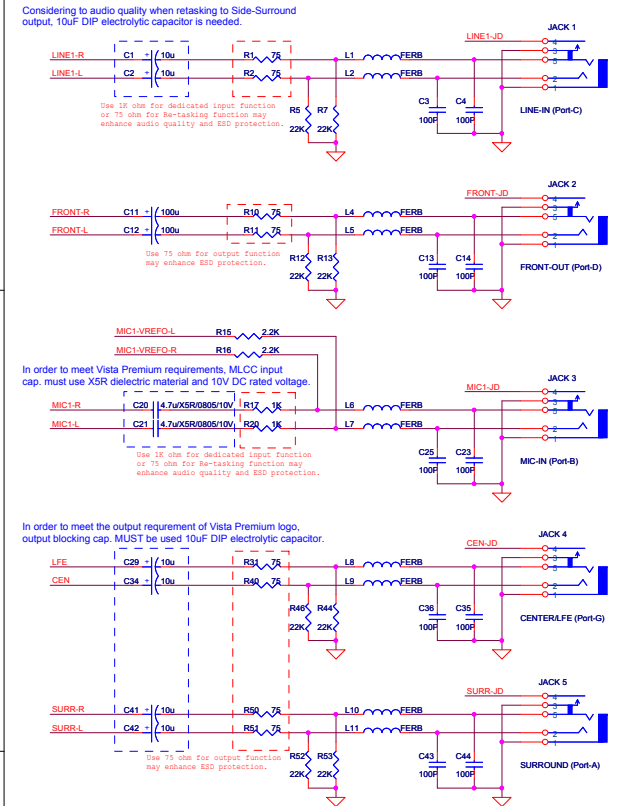
AUDIO POWER



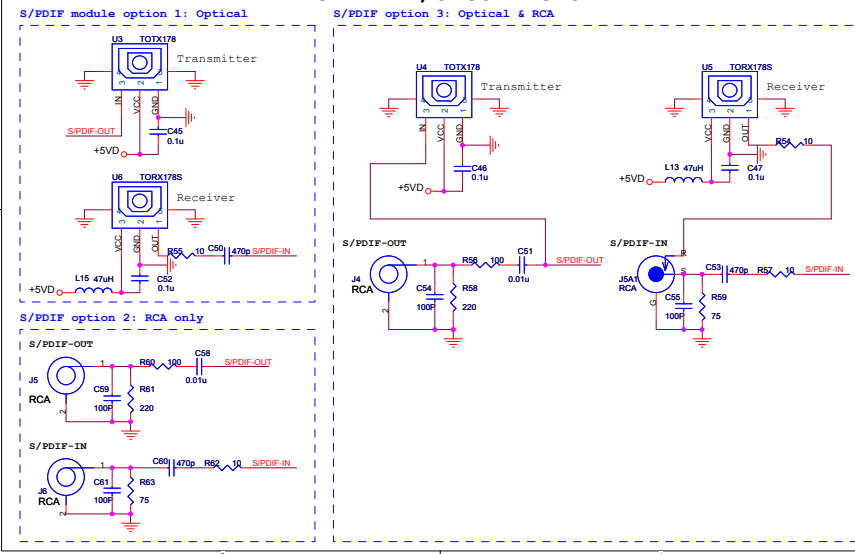
FRONT HEADER



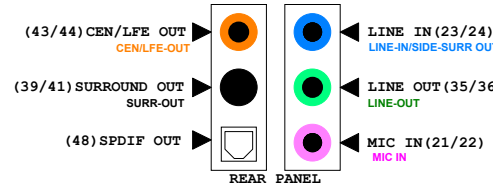
ANALOG I/O CONNECTOR



SPDIF I/O CONNECTOR

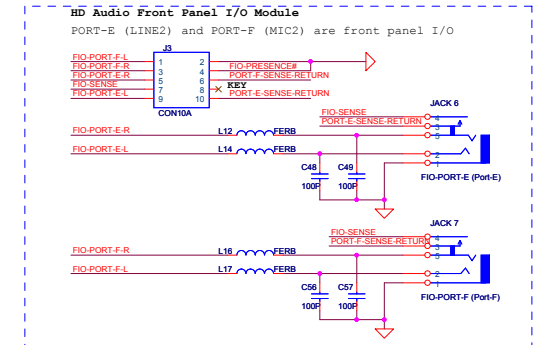


REAR PANEL PHONJACK



ALC885 Configuration (7.1 Channel)
Rear Panel: 5 audio jacks + 1 SPDIF output
Front Panel: 2 re-tasking audio jacks

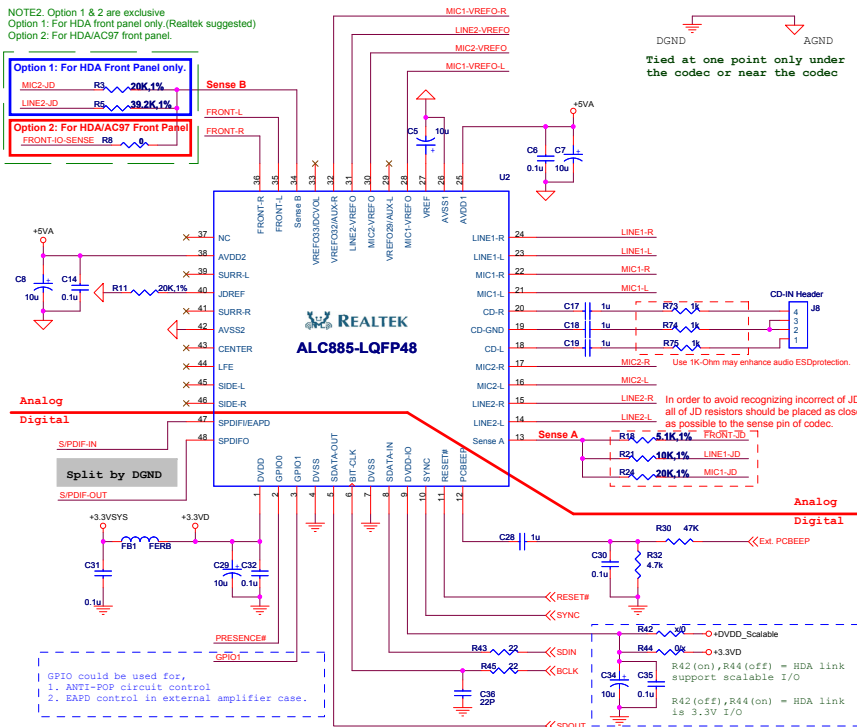
Pin Assignment	Location	Re-tasking
FRONT (pin-35,36)/Port-D	Rear Panel	Front-Out, HP-Out
SURR (pin-39,41)/Port-A	Rear Panel	Surr-Out
CEN/LFE (pin-42,44)/Port-G	Rear Panel	Cen/Lfe-Out
LINE1 (pin-23,24)/Port-C	Rear Panel	Line-In/Side-Surr Out
MIC1 (pin-21,22)/Port-B	Rear Panel	Mic-In
SPDIF OUT (pin-48)	Rear Panel	RCA / OPTICAL SPDIF OUT
LINE2 (pin-14,15)/Port-E	Front Panel	HP-Out, Line-In, Mic-In
MIC2 (pin-16,17)/Port-F	Front Panel	Mic-In, HP-Out, Line-In



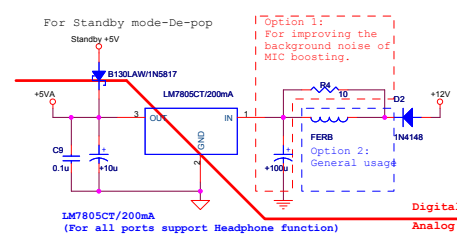
AUDIO CODEC - ALC885

NOTE1: In order to avoid recognizing incorrect of JD, all of JD resistors should be placed as close as possible to the sense pin of codec.

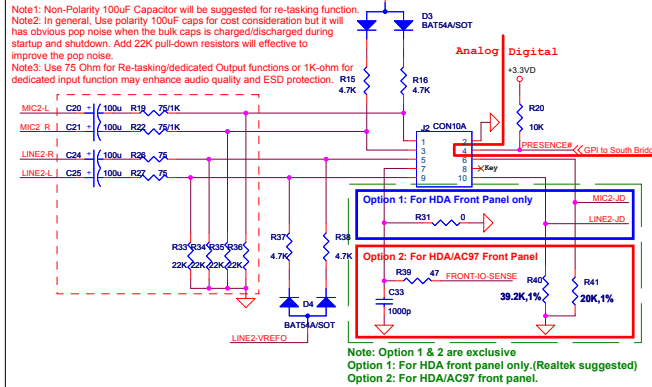
NOTE2: Option 1 & 2 are exclusive
Option 1: For HDA front panel only (Realtek suggested)
Option 2: For HDA/AC97 front panel.



AUDIO POWER

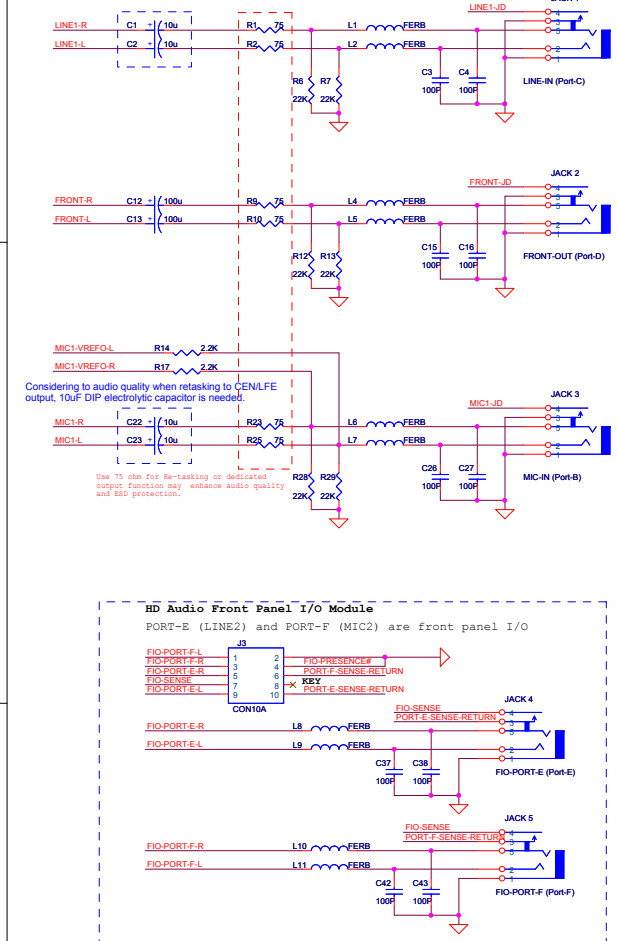


FRONT HEADER

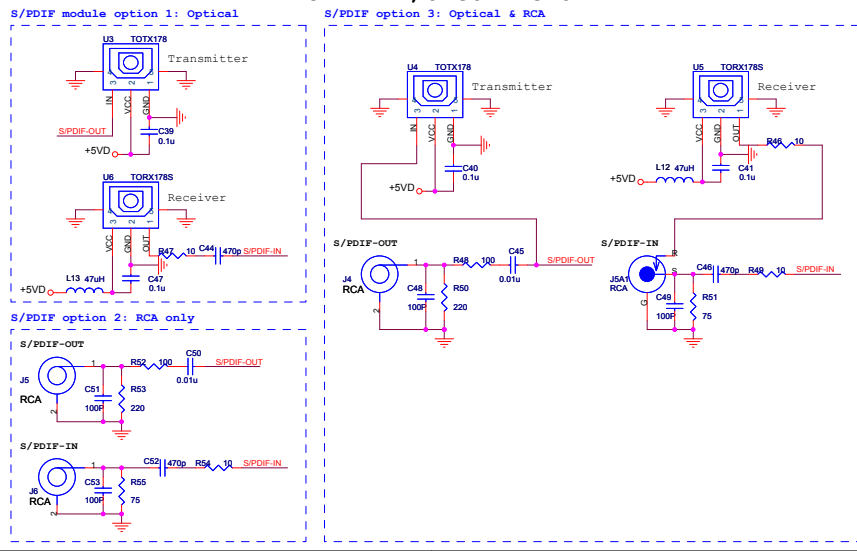


ANALOG I/O CONNECTOR

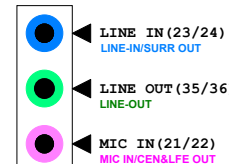
Considering to audio quality when re-tasking to Surround output, 10uF DIP electrolytic capacitor is needed.



SPDIF I/O CONNECTOR



REAR PANEL PHONJACK



ALC885 Configuration (5.1 Channel)
Rear Panel: 3 shared audio jacks
Front Panel: 2 re-tasking audio jacks

Pin Assignment	Location	Re-tasking
FRONT (pin-35,36)/Port-D	Rear Panel	Front-Out, HP-Out
LINE1 (pin-23,24)/Port-C	Rear Panel	Line-In/Surr-Out
MIC1 (pin-21,22)/Port-B	Rear Panel	Mic-In/Cen/Lfe-Out
LINE2 (pin-14,15)/Port-E	Front Panel	HP-Out, Line-In, Mic-In
MIC2 (pin-16,17)/Port-F	Front Panel	Mic-In, HP-Out, Line-In